FINAL ENVIRONMENTAL IMPACT STATEMENT
RANGELAND MANAGEMENT
BUCK SPRINGS RANGE ALLOTMENT

CHAPTER 1: PURPOSE AND NEED

This Chapter describes the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.

THE PROPOSED ACTION

The Proposed Action is described in detail in Chapter 2. In general, the Mogollon Rim (previously Blue Ridge) Ranger District proposed to issue a grazing permit for 634 cow/calf pairs (equivalent to 915 yearlings), and 8 horses. The grazing strategy would be a deferred-rest-rotation system, with season of use running from about May 15 to October 15. Actions connected to this proposal include:

- Precommercially thin dense thickets of small trees on 1,500 acres to promote ease of livestock handling;
- Adjust the number of livestock allowed per year to resource conditions through Annual Operating Instructions;
- Construct 22 miles of new fencing to exclude livestock from riparian drainages, six wet meadows, and two springs, and to split three pastures to improve livestock distribution;
- Construct up to 2 corrals, 3 waterlots and 1 drylot to increase options for livestock management; and
- Exclude livestock from portions of up to 10 stock tanks to improve habitat for leopard frogs.

PROJECT SCOPE

This Environmental Impact Statement (EIS) summarizes the site-specific planning process and the environmental, social and economic impacts of eight management proposals for managing livestock grazing use on the Buck Springs Range Allotment during the next 10 years. This EIS is not a decision document; it only discloses the

environmental consequences of implementing the proposed actions and alternatives to the proposed action. The Forest Supervisor's decision is explained in the Record of Decision that accompanies the EIS. The Project Record documenting the process and analysis includes the process record and all resource specialists' reports, and is located at the Blue Ridge Ranger District Office (Mogollon Rim Ranger District), Happy Jack, Arizona.

The Proposed Action for Rangeland and Watershed Management for the Buck Springs Range Allotment was mailed to the public in April 1999 [#39]. The proposal called for the continuation of the current deferred-rest-rotation strategy for management of the allotment, and relied on structural improvements to affect distribution of livestock and protect sensitive habitats. The proposal also included projects to improve conditions of the watershed through prescribed burning and thinning of trees and by reducing impacts from road use and management, recreation, and past watershed projects. The proposals for livestock and range management and the proposals for watershed improvements are within the same analysis area, and are interrelated but independent actions. Different issues arose from the public scoping process for the two sets of actions. During analysis, the complexity of the inclusion of both sets of projects in one document became overly cumbersome. The Forest Supervisor decided to separate the proposals into two separate analyses [#65], and a second scoping letter for the Buck Springs Rangeland Management was mailed on April 6, 2001. This EIS addresses rangeland and livestock management.

The East Clear Creek Watershed Road Analysis was conducted to evaluate roads within the watershed. The document is on file at the Mogollon Rim District [#XX] and was used to assess proposed road closures.

Purpose and Need for Action

The purpose of the proposed action is to promote a healthy watershed on the Buck Springs Range Allotment that provides suitable habitat for threatened and endangered species while providing forage for domestic livestock in areas appropriate for livestock grazing, and to respond to goals and objectives of the Coconino Forest Plan (USDA Forest 1986). Comparison of the existing condition of the project area and the desired conditions from the Forest Plan indicates a need for:

- coordinated management of two former allotments combined into one;
- increased protection from livestock for potential, suitable, and occupied habitat for threatened, endangered, and sensitive species; and for sensitive resources, such as wet meadows and riparian areas, for the improvement of watershed conditions;
- an even distribution of livestock grazing; and
- the authorization of livestock grazing where appropriate for a 10-year period.

Background

The East Clear Creek (ECC) watershed has received much scrutiny in recent years. In 1995, a collaborative group comprised of state and federal agencies, local residents, interested people, and tribal representatives initiated an ecosystem assessment of the East Clear Creek (ECC) watershed, which includes 96% of the Buck Springs Range Allotment within its boundaries. The Collaborative Team described existing and desired future functioning conditions of the watershed, and developed lists of possible management practices to take the watershed towards desired conditions. The work of the Collaborative Team was incorporated into a dynamic binder of documents entitled *East Clear Creek Ecosystem Management Area: Existing Conditions and Visions for the Future* (USDA 1996). The work of the Collaborative Team was taken forward into the analysis of the Buck Springs Allotment.

The environmental analysis process for the Buck Springs Range Allotment was initiated by a project initiation letter dated June 25, 1998 [#2]. An Interdisciplinary Team (Team) of Forest Service resource specialists, and representatives from the Arizona Game and Fish Department (AGFD), US Fish and Wildlife Service (USFWS), Arizona Department of Environmental Quality (ADEQ), Arizona Cooperative Extension, and the Allotment Permittee (permittee) developed a guiding document for watershed recovery before undertaking an analysis of the allotment. They described the many factors affecting watershed conditions and a threatened fish species within the allotment, including elk and livestock grazing, recreation, transportation system, and introduced aquatic species. In a cooperative effort, the agencies making up the Team developed the *East Clear Creek Watershed Recovery Strategy for the Little Colorado Spinedace and Other Riparian Species* (ECC Strategy, USDA 1999a) to address many of those factors. Using the document to guide actions proposed for the Buck Springs Range Allotment, the Team expanded on existing and desired conditions developed by the ECC Collaborative Team and developed objectives and proposed management practices for the allotment.

The resulting Proposed Action was mailed to individuals, organizations and cooperating resource agencies for review and comment in April 1999 [#39]. From comments received in response, the Team developed statements to capture the significant issues and developed alternative rangeland management strategies. These issues are listed below, and the management alternatives are presented in Chapter 2. The impacts of implementing each alternative are summarized in Chapter 4, Environmental Consequences.

Notice of the Draft EIS was published in the Federal Register and the Arizona Daily Sun on October 12, 2001. Copies of the Draft EIS were sent to eight agencies and 40 individuals. These parties responded with 10 individual comment letters. One additional alternative was analyzed in response to these comments. All comment letters and Forest Service responses to those comments are located in Appendix G of the EIS.

Location

The Buck Springs Range Allotment is located on the Mogollon Rim Ranger District of the Coconino National Forest, in Coconino County (Figure 1). The administrative office for the permitted livestock use is the Blue Ridge Ranger Station Office in Happy Jack, Arizona.

The Allotment includes approximately 70,000 acres of Forest Service lands primarily within the East Clear Creek watershed southeast of State Highway 87, and mostly south of East Clear Creek. The eastern boundary lies along Leonard Canyon and the Apache-Sitgreaves National Forest. The southern boundary is the Mogollon Rim and the Tonto National Forest, and the western boundary adjoins the Hackberry/Pivot Rock Range Allotment.

Relationship to Forest Plan

National forest planning takes place at several levels: national, regional, forest, and project levels. The Buck Springs Range Analysis EIS is a project-level analysis; its scope is confined to addressing the significant issues and possible environmental consequences of the project. It does not attempt to address decisions made at higher levels. It does, however, implement direction provided at those higher levels.

The Coconino National Forest Plan (USDA 1987, 2003 amended) embodies the provisions of the National Forest Management Act (1976), its implementing regulations, and other guiding documents. The Forest Plan sets forth in detail the direction for managing the land and resources of the Coconino National Forest. Where appropriate, the Buck Springs Range Analysis EIS tiers to the Coconino Forest Plan FEIS (USDA 1987, 2003 amended) as encouraged by 40 CFR 1502.20.

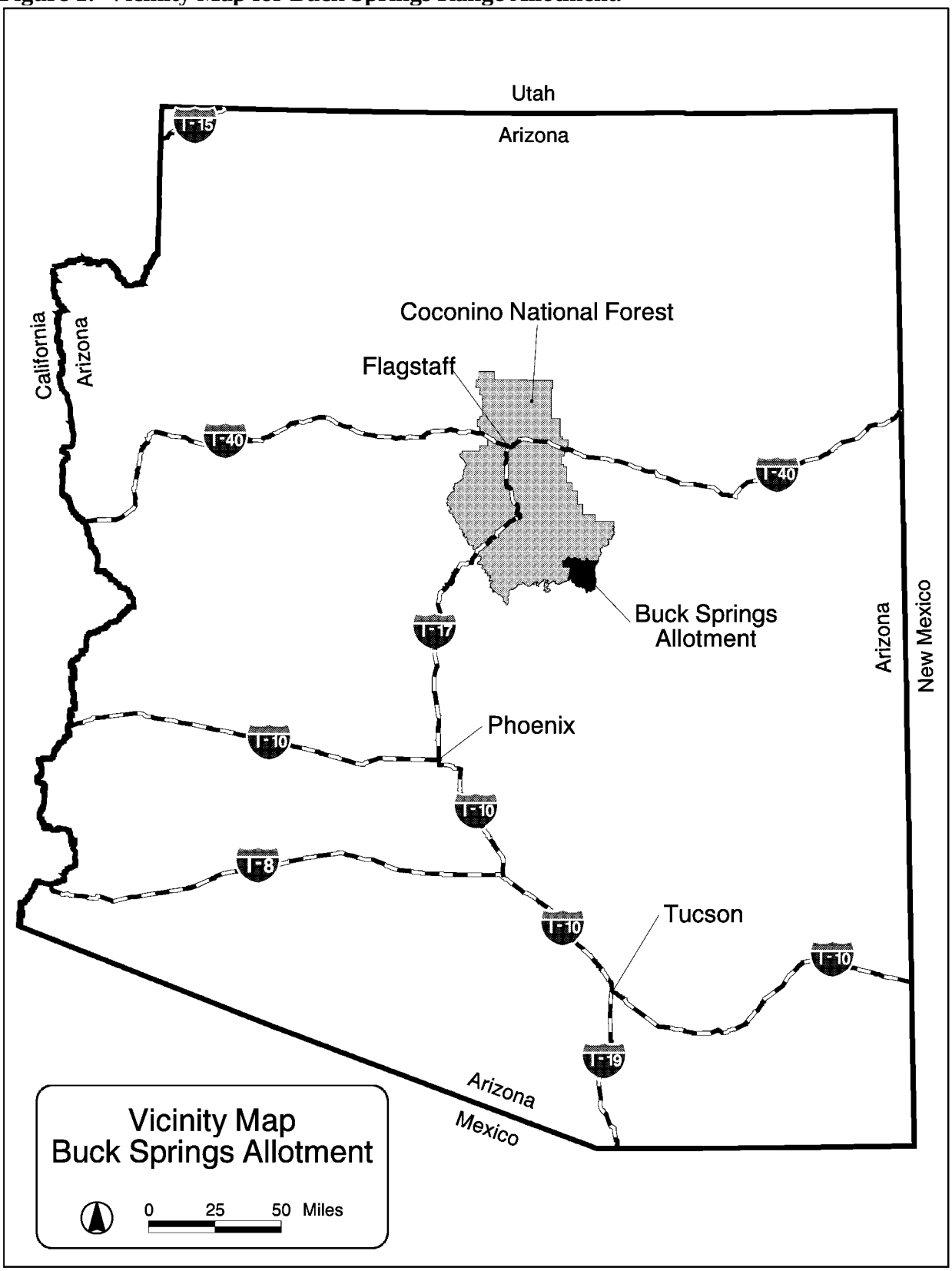
The Coconino Forest Plan established management areas (MAs), which are described in Chapter 3: Affected Environment. The Forest Plan states that grazing allotments will generally be managed to Level C and D in the management areas found on the allotment.

Level C: Livestock grazing is controlled through structural improvements and by physically moving livestock. Long-term capacities are balanced with use by adjusting numbers of livestock. Any forage improvement is generally the result of meeting other resource objectives, such as wildlife habitat improvement.

Level D: Areas are managed intensively for livestock grazing within an overall multiple use concept. Any structural or nonstructural (forage) improvement technique may be used as long as it fits with the natural environment. Reasonable and approved management techniques are applied to sustain capacity and use at high levels.

Full capacity lands are assigned a grazing capacity. Most acres are in a satisfactory soil condition. Less than satisfactory range conditions are improved through completion of the development program contained in Allotment Management Plans (AMPs). In general,

Figure 1: Vicinity Map for Buck Springs Range Allotment.



the Forest Plan stresses that management efforts strive to maintain forage improvement acres in a satisfactory or better condition, while attaining a balanced composition of cool and warm season forage species. Open meadows are maintained and livestock grazing allows for the establishment of suitable vegetation. Management protects and/or enhances soil conditions. Grazing in riparian areas allows natural regeneration of riparian vegetation, including woody species.

PROJECT OBJECTIVES AND ISSUES

Resource objectives were developed based on a comparison of the existing conditions and the desired conditions within and around the project area. The following site-specific project objectives were developed to guide the agency and the permittee in moving toward the desired conditions.

Livestock Grazing

- Manage grazing to promote the development of sponge meadows (meadows with satisfactory soil conditions and proper functioning conditions in riparian areas), which results in an increase in water storage and duration of flows in streams. Restrict livestock trailing along sensitive streams, headwater meadows and across canyons, except at designated crossings.

- Manage livestock grazing distribution and movements to even out the patterns of forage use and improve forage diversity, health and vigor. Achieve forage utilization in balance with ecologically sustainable forage production that provides for the needs of threatened and endangered species, soil conditions, and plant health and vigor.

Soils and Vegetation

- Maintain existing satisfactory soil conditions and vegetative conditions. Minimize impacts due to livestock management. Increase vegetative ground cover to 60-80% of potential in meadows in the 10 years of this plan, and to at least 90% of potential by the year 2020, and promote improvement of unsatisfactory soil conditions.

- Reduce the number and extent of dense sapling thickets that impede the gathering of livestock. Manage for native understory species, and reduce the dominance of non-native species. Manage for a diverse grass, forb, shrub community. Increase vegetative diversity and total biomass in riparian areas and meadows, with an emphasis on riparian species. Increase the extent of wetted areas, and the stubble height of residual vegetation after growing season.

Maintain existing riparian proper functioning conditions. Improve at-risk and nonfunctional riparian stream reaches to proper functioning condition.

Water Quality and Water Quantity

- Maintain current water quality, and improve the duration of flows in headwater meadows and streams.

Wildlife

- Improve habitat for Little Colorado spinedace and northern and Chiracahua leopard frogs in headwater meadows and streams through changes in livestock management.

- Minimize disturbance from livestock operations in Mexican spotted owl Protected Activity Centers (PACs), northern goshawk post-fledgling family areas (PFAs), and turkey nesting areas. Provide cover and vegetative food resources for prey species of raptors, by leaving adequate residual stubble height of grasses in key areas.

Significant Issues

The Proposed Action was distributed for review and comment to 215 individuals, organizations, and agencies. The team received 14 written responses [#46]. Several responses expressed support for the project, or asked to be removed from the mailing list. A few comments were outside the scope of the project. Four primary issues were raised and were used to develop alternatives for managing the Buck Springs Range Allotment. Units of Measure will be used to track how the alternatives respond to the issues.

Issue 1: The Proposed Action exceeds carrying capacity of the allotment, taking into account the large elk population.

The Interdisciplinary Team conducted an analysis of forage availability versus use by livestock and wildlife. In addition, forage production was measured in 1998, 1999, 2000, and 2001 and forage utilization is monitored annually. The information gathered from these processes was used to assign permitted numbers to each alternative, and indicate that the permitted numbers are within carrying capacity of the allotment. Differences in permitted numbers by alternative are based on the acres allotted to livestock grazing; ie: the different alternatives use different pastures, with different grazing schemes that are incorporated into carrying capacity for each alternative. Annual fluctuations in forage production and conditions will be addressed through annual changes to livestock numbers through the Annual Operating Instructions (AOIs). This is addressed in more detail in Chapter 4 and in Project Record [#79].

Units of Measure: Forage utilization levels in key areas, distribution of forage utilization and carrying capacity of livestock.

Issue 2: The Proposed Action, which is a deferred-rest-rotation system, will result in overuse of forage plants that are grazed every year. Recommends a rest-rotation

grazing system, with each pasture rested at least one year in three. Another comment on grazing strategy recommended that herding be used to improve distribution of use.
The current grazing system is a deferred-rest-rotation system, which is carried through several of the grazing alternatives. A separate alternative (Alternative F) was developed specifically to incorporate a rest-rotation grazing system, with pastures rested one year in two, and is described fully in Chapter 2. The topography and pasture layout of the allotment makes a one-year-in-three rest rotation system impractical. Another Alterative (G) incorporates a rest-rotation grazing system that emphasizes use of the northern pastures only. A third alternative (Alternative D) was developed that uses herding as an alternative to extensive fencing. A fourth (Alternative K) was developed in response to comments by the permittee.

Units of Measure: Type of grazing system and distribution of forage utilization.

Issue 3: The Proposed Action, which requires extensive fencing with numerous cattleguards, is not economically feasible.

Several letters commented on the issue of economic cost. They were not only concerned with the total cost of all the proposed new structures, but also wanted to know who would pay for the installation and upkeep and how these changes would affect other forest users and wildlife. With the cost of operating a ranch increasing every year and the public's awareness of federal spending and budget concerns, the public wants to know the economic feasibility of the proposal.

An economic analysis was conducted using the Quicksilver program, which compares the economic benefits and costs. Costs of improvements (fences, cattleguards, corrals, waterlots) are shared by the US Forest Service and the Range Permittee, while maintenance is largely the responsibility of the Permittee. Two alternatives call for the permittee to assume a greater proportion of the improvement costs. Chapter 4 describes the effects of the alternatives on forest users, wildlife, and primary resources, and describes the economic analysis more fully. A comparison of the alternatives and present net value of each is described and includes a table of improvement costs by alternative.

Units of Measure: Benefit/Cost, Present Net Value, Miles of new fence, number of cattleguards, corrals, wetlots, drylots.

Issue 4: The current management of the allotment has been determined to cause adverse effects to the Little Colorado spinedace and its critical habitat (Biological Evaluation and Assessment submitted April 4, 1998, and the resulting Biological Opinion of February 2, 1999, USDI 1999). The Proposed Action addresses some of the impacts of grazing on watershed health and the Little Colorado spinedace, but there is potential for continuing impacts in some areas of the allotment.

The IDT addresses concerns for watershed conditions and potential impacts to the Little Colorado spinedace in the Proposed Action and other action alternatives. Different levels

of protection are offered in the alternatives, with Alternative G developed specifically to include the maximum level of protection while allowing livestock grazing.

Units of Measure: Miles of drainage excluded from livestock, acres of wet meadows excluded from livestock, livestock access by PFC classes (riparian drainages) and soil conditions (meadows).

DECISION FRAMEWORK

The Coconino Forest Supervisor will make a decision based on many factors, and within governing laws, regulations, and policies.

Decision To Be Made

Based on the environmental analysis in this EIS and comments received, the Coconino Forest Supervisor will decide whether and how to manage rangelands and livestock on the Buck Springs Range Allotment in accordance with Forest Plan goals, objectives and desired future conditions. If an action alternative is selected, this decision will include:

- The locations, scheduling, grazing strategy, and livestock numbers appropriate for livestock management on the allotment for the next 10 years;
- The fences and other improvements necessary for the facilitation of livestock management and protection of other resources;
- The vegetative treatments required for the facilitation of livestock management;
- Mitigation measures and monitoring requirements and;
- The authorization of a 10-year term permit for grazing on this allotment.

Federal and State Permits, Licenses, and Certifications

There are no permits, licenses, or certifications required for the implementation of this project. The Forest Service obtained concurrence on no effects to cultural resources from the Arizona State Historic Preservation Office and a determination of non-jeopardy to threatened and endangered species from the US Fish and Wildlife Service.

Applicable Laws and Executive Orders

Shown below is a partial list of federal laws and executive orders pertaining to project-specific planning and environmental analysis on federal lands. While most pertain to all federal lands, some of the laws are specific to Arizona. Disclosures and findings required by these laws and orders are contained in Chapters 2 and 4 of this EIS.

Multiple-Use Sustained-Yield Act of 1960
National Historic Preservation Act of 1966 (as amended)
Wild and Scenic Rivers Act of 1968, amended 1986
National Environmental Policy Act (NEPA) of 1969 (as amended)
Clean Air Act of 1970 (as amended)
Endangered Species Act (ESA) of 1973 (as amended)
Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 (as amended)
National Forest Management Act (NFMA) of 1976 (as amended)
Clean Water Act of 1977
American Indian Religious Freedom Act of 1978
Archeological Resource Protection Act of 1980
Cave Resource Protection Act of 1988
Executive Order 11593 (cultural resources)
Executive Order 11988 (floodplains)
Executive Order 11990 (wetlands)
Executive Order 12898 (environmental justice)
Executive Order 12962 (aquatic systems and recreational fisheries)
Executive Order 13186 (responsibilities of federal agencies to protect migratory birds)

Additional NEPA Analyses Being Undertaken

Many factors are affecting the watershed and contributing to unsatisfactory soil conditions and impaired and non-functional riparian conditions. Some of these impacts are being addressed in the East Clear Creek Watershed Health Improvement Environmental Assessment, which includes the proposed action for watershed and forest health that was described in the original proposal. The NEPA analysis includes prescribed burning, channel restoration actions, and thinning around some springs to augment flow at these springs. The assessment addresses additional efforts to improve existing watershed conditions (decision expected fall 2003, contact D. Fleishman, 928-354-2216).

Another project has been proposed that partially overlies the Buck Springs Allotment. The Victorine Fuels Reduction Project includes the northeastern portion of the allotment, extending to the north, and is proposed to protect a large area of Urban Interface. The Proposed Action calls for thinning of small trees, treatment of slash through lop and scatter or chipping, and prescribed burning. The Forest Service has developed alternatives and is currently analyzing effects (contact J. Jerman, 928-477-2255).

The range allotment to the north of the Buck Springs Allotment is currently undergoing NEPA analysis. The Bar T Bar Range Allotment has been combined with the Anderson Springs Allotment to its north, for a detailed analysis of a proposed action submitted by The Diablo Trust, a collaborative team made up of ranchers, agency personnel, environmentalists, and interested community members. The US Forest Service has

developed alternatives to the proposed action, and is currently preparing a draft Environmental Impact Statement (contact E. Humphrey, 928-477-2255).

The Coconino National Forest is one of three Forests (Coconino, Kaibab, and Prescott National Forests) conducting an assessment for the control of noxious weeds (Noxious Weeds, Three Forest Assessment, contact D. Brewer, 928-635-8200). The Proposed Action for the Noxious Weed analysis discusses several means of controlling noxious weed spread, including the potential use of herbicides. The draft environmental impact statement is expected to be out in the spring of 2003.

Ongoing activities within the watershed, or adjacent to the watershed that may have potential cumulative effects to the resources on the allotment area are discussed in Chapter 4: Environmental Consequences.

PROJECT RECORD AVAILABILITY

Additional documentation, including more detailed analyses of project-area resources, may be found in the project planning record located at the Blue Ridge Ranger Station, Mogollon Rim Ranger District, in Happy Jack, Arizona. These records are available for public review pursuant to the Freedom of Information Act (5 U.S.C. 552).